

IN THE CLAIMS:

Claims 3, 36 and 52-65 were previously canceled herein. Claims 14, 15, 35, 37, 41, 46 and 47 have been amended herein. All of the pending claims 1 through 65 are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

Listing of Claims:

1. (previously presented) An apparatus for conditioning a polishing pad, comprising:
a supporting substrate including a conditioning surface; and
a plurality of abrasive elements secured to at least the conditioning surface, the plurality of abrasive elements comprising a material that is degradable or dissolvable by at least one chemical that does not substantially degrade or dissolve a material of a polishing pad to be conditioned with the apparatus.
2. (previously presented) The apparatus of claim 1, wherein the plurality of abrasive elements have a dimension of from about 25 μm to about 500 μm .
3. (canceled)
4. (previously presented) The apparatus of claim 1, wherein the plurality of abrasive elements comprise abrasive particles at least partially embedded in the supporting substrate.
5. (previously presented) The apparatus of claim 4, wherein the abrasive particles are at least partially embedded in the conditioning surface.
6. (previously presented) The apparatus of claim 5, further including abrasive elements that are completely embedded within the supporting substrate.

7. (previously presented) The apparatus of claim 4, wherein the supporting substrate comprises at least one of a polymer, a metal, a ceramic, paper, a paper-like compound, a textile, a mat of material, and a mesh of material.

8. (previously presented) The apparatus of claim 1, wherein at least some of the plurality of abrasive elements are located beneath the conditioning surface.

9. (previously presented) The apparatus of claim 1, wherein the supporting substrate is substantially rigid.

10. (previously presented) The apparatus of claim 9, wherein the supporting substrate comprises at least one of a polymer, a metal, and a ceramic.

11. (previously presented) The apparatus of claim 1, wherein the supporting substrate is pliable.

12. (previously presented) The apparatus of claim 11, wherein the supporting substrate comprises at least one of paper, a paper-like compound, textile, a mat of material, and a mesh of material.

13. (previously presented) The apparatus of claim 1, wherein the supporting substrate is secured to a rigid support.

14. (currently amended) The apparatus of claim 1, wherein the plurality of abrasive elements ~~comprise~~ comprises filaments.

15. (currently amended) The apparatus of claim 1, wherein the plurality of abrasive elements ~~protrude from and are~~ protrudes from and is continuous with the conditioning surface.
16. (previously presented) The apparatus of claim 1, wherein the plurality of abrasive elements and the supporting substrate comprise the same material.
17. (previously presented) The apparatus of claim 15, wherein the plurality of abrasive elements and at least the conditioning surface of the supporting substrate comprise the material that is degradable or dissolvable by at least one chemical that does not substantially degrade or dissolve a material of a polishing pad to be conditioned with the apparatus.
18. (previously presented) The apparatus of claim 17, wherein the material that is degradable or dissolvable by at least one chemical that does not substantially degrade or dissolve a material of a polishing pad to be conditioned comprises at least one of silicon dioxide, iron, an iron alloy, copper, nickel, and tungsten.
19. (previously presented) The apparatus of claim 1, wherein the at least one chemical comprises at least one of hydrofluoric acid, sodium hydroxide, potassium hydroxide, and hydrochloric acid.

20. (previously presented) A method for conditioning a polishing pad, comprising:
providing a polishing pad including a polishing surface;
abrading at least a portion of the polishing surface with a conditioner having abrasive material
secured thereto that is etchable selectively with respect to a material of the polishing pad;
and
exposing at least the portion of the polishing surface to at least one chemical to remove particles
of the abrasive material from at least the portion without substantially degrading or
dissolving the material of the polishing pad.

21. (previously presented) The method of claim 20, wherein abrading comprises
abrading at least the portion of the polishing surface with the conditioner comprising an abrasive
material including silicon dioxide.

22. (previously presented) The method of claim 21, wherein abrading comprises
abrading at least the portion of the polishing surface with the abrasive material being in the form
of at least one of a particle and a structure protruding from a conditioning surface of the
conditioner.

23. (previously presented) The method of claim 21, wherein exposing comprises
exposing at least the portion of the polishing surface to at least one chemical comprising at least
one of hydrofluoric acid, sodium hydroxide, and potassium hydroxide.

24. (previously presented) The method of claim 20, wherein abrading comprises
abrading at least the portion of the polishing surface with the conditioner comprising an abrasive
material including at least one of iron, an iron alloy, copper, nickel, and tungsten.

25. (previously presented) The method of claim 24, wherein abrading comprises abrading at least the portion of the polishing surface with the abrasive material being in the form of at least one of a filament, a particle, and a structure protruding from a conditioning surface of the conditioner.

26. (previously presented) The method of claim 24, wherein exposing comprises exposing at least the portion of the polishing surface to at least one chemical comprising hydrochloric acid.

27. (previously presented) The method of claim 20, further comprising wearing away a conditioning surface of the conditioner to expose abrasive material.

28. (previously presented) The method of claim 27, wherein wearing away is effected by contact of abrasive material that is released from the conditioner.

29. (previously presented) The method of claim 20, wherein abrading is effected separate from polishing equipment.

30. (previously presented) The method of claim 20, further comprising sonicating at least the at least one chemical as the polishing pad is exposed to the at least one chemical.

31. (previously presented) A system for conditioning a polishing pad, comprising:
a polishing pad support;
a conditioner including:
 a supporting substrate including a conditioning surface; and
 a plurality of abrasive elements secured to the conditioning surface, the plurality of
 abrasive elements comprising a material that is degradable or dissolvable by at
 least one chemical that does not substantially degrade or dissolve a material of a
 polishing pad to be conditioned with the plurality of abrasive elements,
the conditioner being positionable over the polishing pad support so as to place the
 conditioning surface in contact with a polishing pad disposed on the polishing pad
 support; and
at least one movement component configured to move at least one of the polishing pad support
 and the conditioner laterally relative to the other of the polishing pad support and the
 conditioner.
32. (previously presented) The system of claim 31, wherein the at least one
movement component is configured to rotate one of the polishing pad support and the
conditioner.
33. (previously presented) The system of claim 31, wherein the at least one
movement component is configured to laterally vibrate one of the polishing pad support and the
conditioner.
34. (previously presented) The system of claim 31, wherein the at least one
movement component is configured to move one of the polishing pad support and the conditioner
substantially linearly relative to the other of the polishing pad support and the conditioner.

35. (currently amended) The system of claim 31, wherein each abrasive element of the plurality of abrasive elements of the conditioner ~~have a~~ has a dimension of from about 25 μm to about 500 μm .

36. (canceled)

37. (currently amended) The system of claim 31, wherein the plurality of abrasive elements of the conditioner ~~comprise~~ comprises abrasive particles at least partially embedded within the supporting substrate of the conditioner.

38. (previously presented) The system of claim 37, wherein the abrasive particles are at least partially embedded in the conditioning surface.

39. (previously presented) The system of claim 38, further including abrasive particles that are completely embedded within the supporting substrate.

40. (previously presented) The system of claim 37, wherein the supporting substrate of the conditioner comprises at least one of a polymer, a metal, a ceramic, paper, a paper-like compound, and a fabric.

41. (currently amended) The system of claim 31, wherein ~~said the~~ the plurality of abrasive elements of the conditioner ~~are located~~ is located beneath the conditioning surface thereof.

42. (previously presented) The system of claim 31, wherein the supporting substrate of the conditioner is substantially rigid.

43. (previously presented) The system of claim 42, wherein the supporting substrate of the conditioner comprises at least one of a polymer, a metal, and a ceramic.

44. (previously presented) The system of claim 31, wherein the supporting substrate of the conditioner is pliable.

45. (previously presented) The system of claim 44, wherein the supporting substrate comprises at least one of paper, a paper-like compound, and fabric.

46. (currently amended) The system of claim 31, wherein the plurality of abrasive elements of the conditioner ~~comprise~~ comprises filaments.

47. (currently amended) The system of claim 31, wherein the plurality of abrasive elements of the conditioner ~~protrude from and are~~ protrudes from and is continuous with the conditioning surface thereof.

48. (previously presented) The system of claim 31, wherein the plurality of abrasive elements and the supporting substrate of the conditioner comprise the same material.

49. (previously presented) The system of claim 47, wherein the plurality of abrasive elements of the conditioner and at least the conditioning surface of the supporting substrate of the conditioner comprise the material that is degradable or dissolvable by at least one chemical that does not substantially degrade or dissolve a material of a polishing pad to be conditioned with the apparatus.

50. (previously presented) The apparatus of claim 49, wherein the material that is degradable or dissolvable by at least one chemical that does not substantially degrade or dissolve a material of a polishing pad to be conditioned comprises at least one of silicon dioxide, iron, an iron alloy, copper, nickel, and tungsten.

51. (previously presented) The apparatus of claim 31, wherein the at least one chemical comprises at least one of hydrofluoric acid, sodium hydroxide, potassium hydroxide, and hydrochloric acid.

52-65 (canceled)